

IN THE CLAIMS:

1 – 7 (canceled)

8. (currently amended) A method using a processor (or computer) to perform the steps of determining a living character of a finger, of a user carrying a fingerprint and said finger being placed on a fingerprint sensor having an optical system, the method comprising the steps of:

- (a) measuring an electrical quantity of the finger;
- (b) taking of an image of the fingerprint carried by the finger by means of the optical system;
- (c) measurement of a particular characteristic of the image, said particular characteristic being selected from the group consisting of: the contrast of the image, the average greyscale of the image, the width of the images of the ridges formed by the said fingerprints, and the average greyscale of the ridges;
- (d) deducing from the particular characteristic thus measured, a range of values for the electrical quantity of the finger judged in principle acceptable using a relationship established between values of a particular characteristic of the image and a range of said values of the electrical quantity of the finger judged acceptable; and
- (e) validation of the living character of the finger when the measured electrical quantity belongs to the deduced range.

9. (canceled)

10. (currently amended) A method according to Claim [[9]] 8, wherein the fingerprint sensor has electrodes, and wherein the electrical quantity is an impedance which value is measured at the terminals of said electrodes ~~that the sensor has~~.

11. (currently amended) A fingerprint sensor adapted to determine a living character of a finger, of a user carrying a fingerprint, said finger being placed on the sensor, the sensor comprising:

- (a) means of measuring an electrical quantity of the finger;
- (b) an optical system for taking an image of the fingerprint carried by the finger by means of the optical system;
- (c) means for measuring a particular characteristic of the image, said particular characteristic being selected from the group consisting of: the contrast of the image, the average greyscale of the image, the width of the images of the ridges formed by the said fingerprints, and the average greyscale of the said ridges;
- (d) means of deducing from the particular characteristic thus measured, a range of values for the electrical quantity judged in principal acceptable using a relationship established between values of the particular characteristic of the image and a range of values of the electrical quantity of the finger judged acceptable; and
- (e) means of validating the living character of the finger when the measured value of the electrical quantity belongs to the deduced range.

12. (canceled).

13. (currently amended) A sensor according to Claim [[12]] 11, wherein the means of measuring an electrical quantity is a means of measuring impedance at the terminals of electrodes.

14. (previously presented) A sensor according to Claim 13, wherein the electrodes are formed on a transparent plate, the connections to the electrodes being conductive and also transparent.

15. (new) A method of using a processor (or computer) to perform the steps of determining a living character of a finger of a user carrying a fingerprint and the finger being placed on a fingerprint sensor having an optical system and a transparent conductive impedance electrode measuring system, the method comprising the steps of:

- (a) measuring an electrical impedance quantity of the finger by the electrode measuring system;
- (b) taking of a visible image of the fingerprint carried by the finger by the optical system;
- (c) measuring with the processor a particular characteristic value of the image, the particular characteristic value selected from a group consisting of: the contrast of the image, the average greyscale of the image, the width of the images of the ridges formed by the fingerprint, and the average greyscale of the ridges;
- (d) deducing from the particular characteristic value thus measured with the processor a range of the electrical impedance quantities of the finger judged in principle acceptable using a relationship established between the impedance quantity of the particular characteristic value of the image and the range of the impedance quantities of the finger judged acceptable; and
- (e) validating with the processor the living characteristic value of the finger when the measured electrical impedance quantity belongs to the deduced range of impedance quantities.

16. (new) A fingerprint sensor adapted to determine the living character of a finger, of a user carrying a fingerprint, the finger being placed on the sensor, the sensor comprising:

- (a) means of measuring an electrical impedance quantity of the finger;
- (b) an optical system for taking an image of the fingerprint carried by the finger;
- (c) means of measuring a particular characteristic value of the image, the particular characteristic value being selected from a group consisting of: the contrast of the image, the average greyscale of the image, the width of the images of the ridges formed by the fingerprint, and the average greyscale of the ridges;
- (d) means of deducing from the particular characteristic value thus measured, a range of the electrical quantities judged in principle acceptable using a relationship established between the impedance quantity of a particular characteristic value of the image and the range of impedance quantity judged acceptable; and
- (e) means of validating the living character of the finger when the measured electrical quantity belongs to the deduced range.

17. (new) A sensor according to Claim 16, wherein the means of measuring an electrical quantity is a means of measuring impedance at terminals of electrodes.

18. (new) A sensor according to Claim 17, wherein the electrodes are formed on a transparent plate, the connections to the electrodes being conductive and also transparent.

19. (new) The method of claim 8, wherein the step (c) further comprises a step of collecting the characteristics of the image together to form a grade between 0 and 1.

20. (new) A sensor according to claim 11, wherein the means for measuring a particular characteristic of the image further comprises a grade between 0 and 1 formed from a collection of the characteristics of the image.